

## ABSTRACT OF THE DISCLOSURE

The present invention is directed to compositions and methods for increasing the reproductive performance of breeding populations of swine. The swine feed compositions of the present invention are animal feed blends including marine animal products such as a fish oil or fish meal products. Methods include administering to the female swine a biologically effective amount of the swine feed composition comprising marine animal products wherein the marine animal products contain omega-3 fatty acids or esters thereof that serve as a source of metabolites in the female swine, to improve reproductive performance of the female swine. The methods can also be used to increase the fertility of a male swine, and can be used to increase the reproductive performance of both male and female animals by feeding the swine feed composition to both the male and female swine.